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REMARKS

Claims 1-6 are in the case. Claims 1-3 and 5-6 are rejected under 35 USC § 102 over Japanese publication 05-121767 to Matsumi. Claim 3 is additionally rejected under 35 USC § 103 over Matsumi in view of USPN 6,309,943 to Glenn et al. Claim 4 is rejected under 35 USC § 103 over Matsumi in view of USPN 4,423,127 to Fujimura. Claim 1 has been amended and claims 7-20 have been cancelled. No new matter has been introduced by the amendments, which are supported by the disclosure of the original claims and the specification when considered in their entirety. Reconsideration and allowance of the claims are requested.

CLAIM REJECTIONS UNDER §102

Claims 1-3 and 5-6 are rejected under 35 USC § 102 over Matsumi. Independent claim 1 claims, *inter alia*, an integrated circuit substrate with a first surface adapted for receiving a series of aligned layers during the creation of the integrated circuit, *the first surface having no layers formed thereon*, and a second surface *having no layers formed thereon* and at least one alignment mark formed thereon. Thus, the substrate as claimed has two sides, where one side is adapted to receive aligned layers, but doesn't have any layers formed on it. The other side has an alignment mark formed on it, and also doesn't have any other layers formed on it.

Matsumi does not describe such a substrate. Matsumi describes the process of forming a semiconductor pressure sensor. As a part of this process, two substrates are oxidized, and doubling marks are formed in one of the oxide layers on each of the two substrates. On the first substrate, these doubling marks are called first doubling marks 204, and on the second substrate, these doubling marks are called second doubling marks 209. This can be seen in figure 1(c). Figure 2(a) depicts the structure of figure 1(c) after it has been flipped over, so that the second doubling marks 209 are now depicted on the bottom of the combined structure rather than on the top. In addition, the first substrate, which is now the top substrate, has been ground down, and the first doubling marks 204 are gone. As can be seen, there are many layers present on the top side of the second

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substrate that is opposite the second doubling marks 209, including layers 210, 205, 206, and even the remains of the first substrate 201.

Thus, Matsumi does not meet the limitation of claim 1 which states that the side opposite the alignment mark does not have any layers formed on it. Further, it is likely that Matsumi also does not meet the limitation of claim 1 which states that the side with the alignment mark does not have any layers formed on it, as next described in more detail.

Although the oxide layer 207 in which the second doubling marks 209 are formed, as depicted in figure 1(c), is not depicted in figure 2(a), it is most likely that the oxide layer 207 still exists in figure 2(a), but just isn't depicted. The reason for this is that the detailed description of the process never mentions that an etch is accomplished to recess the second doubling marks 209 into the silicon of the substrate 208, and neither does the detailed description ever mention that the oxide 207 is stripped off of the second substrate 209. Both of these processes would need to be performed prior to forming the oxide layer 211, which is most probably used merely to fill the second doubling marks 209 and to add an oxide layer to the top exposed surface. As these are substantial processing steps, it is highly unlikely that the drafter just happened to forget to describe them in the specification. In fact, it appears that there would be problems with undercutting existing oxide layers, such as layer 210, if an oxide strip operation were to be performed on the structure at this point in time. Therefore, it is more likely that oxide layer 207 still exists, but was inadvertently omitted from figure 2(a).

Thus, none of the substrates or structures described by Matsumi have a substrate with no layers on either side and with an alignment mark on one side. Therefore, claim 1 patentably defines over Matsumi. Reconsideration and allowance of claim 1 are respectfully requested. Dependent claims 2-3 and 5-6 depend from independent claim 1, and contain additional important aspects of the invention. Therefore, dependent claims 2-3 and 5-6 patentably define over Matsumi. Reconsideration and allowance of dependent claims 2-3 and 5-6 are respectfully requested.

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CLAIM REJECTIONS UNDER §103

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumi in view of Glenn et al. Dependent claim 3 depends from independent claim 1, and therefore claims, *inter alia*, an integrated circuit substrate with a first surface adapted for receiving a series of aligned layers during the creation of the integrated circuit, *the first surface having no layers formed thereon*, and a second surface *having no layers formed thereon* and at least one alignment mark formed thereon.

The deficiencies of Matsumi in regard to these limitations are described at length above. Glenn et al. do not compensate for the deficiencies of Matsumi. Glenn et al. describe a substrate that already has all of the aligned layers formed on it before the alignment marks are formed. Thus, the substrate of Glenn et al. does not have two sides with no layers formed thereon, and an alignment mark on one of the sides. Thus, claim 3 patentably defines over Matsumi in view of Glenn et al. Reconsideration and allowance of claim 3 are respectfully requested.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumi in view of Fujimura. Dependent claim 4 depends from independent claim 1, and therefore claims, *inter alia*, an integrated circuit substrate with a first surface adapted for receiving a series of aligned layers during the creation of the integrated circuit, *the first surface having no layers formed thereon*, and a second surface *having no layers formed thereon* and at least one alignment mark formed thereon.

The deficiencies of Matsumi in regard to these limitations are described at length above. Fujimura do not compensate for the deficiencies of Matsumi, in that Fujimura does not describe printing an alignment mark on the back side of the substrate that has no layers on either side. Therefore, the combination of Glenn et al. and Fujimura does not described the substrate as claimed in claimed 4. Thus, claim 4 patentably defines over Glenn et al. in view of Fujimura. Reconsideration and allowance of claim 4 are respectfully requested.

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CONCLUSION

Applicants assert that the claims of the present application patentably define over the prior art made of record and not relied upon for the same reasons as given above. Applicants respectfully submit that a full and complete response to the office action is provided herein, and that the application is now fully in condition for allowance. Action in accordance therewith is respectfully requested.

In the event this response is not timely filed, applicants hereby petition for the appropriate extension of time and request that the fee for the extension be charged to deposit account 12-2355. If other fees are required by this amendment, such as fees for additional claims, such fees may be charged to deposit account 12-2252. Should the examiner require further clarification of the invention, it is requested that he contact the undersigned before issuing the next office action.

Sincerely,

LUEDEKA, NEELY & GRAHAM, P.C.

By: 

Rick Barnes, 39,596

2004.01.13

P.O. Box 1871
Knoxville TN 37901
T:1.865.546.4305
F:1.865.934.0444
RBarnes@LNG-Patent.com